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## Redescription of *Congrhynchus talabonoides* Fowler, 1934 (Anguilliformes: Congridae) based on specimens collected from the Philippines, Taiwan and India

DAVID G. SMITH<sup>1</sup>, HSUAN-CHING HO<sup>2,3,5</sup> & K. S. SUMOD<sup>4</sup>

<sup>1</sup>*Smithsonian Institution, Museum Support Center, Suitland, MD, U.S.A.*

<sup>2</sup>*National Museum of Marine Biology & Aquarium, Pingtung, Taiwan*

<sup>3</sup>*Institute of Marine Biology, National Dong Hwa University, Pingtung, Taiwan*

<sup>4</sup>*Centre for Marine Living Resources and Ecology, Ministry of Earth Sciences, Govt. of India, Kendriya Bhavan, Kakkanad, Kochi-37, Kerala, India*

<sup>5</sup>*Corresponding author. E-mail: ogchoho@gmail.com*

The rare congrid eel species *Congrhynchus talabonoides* Fowler, 1934 was described from three specimens collected in the Philippines during the Albatross expedition in 1908–1909. The only mention of the species in the literature since its description has been in a type catalog (Smith, 1994), an identification guide (Smith, 1999), and a checklist of the eels of Taiwan (Ho *et al.*, 2015, where it was erroneously placed in the Muraenesocidae). The first author discovered the Taiwan specimen in 2009 during a visit to the National Museum of Marine Biology and Aquarium in Taiwan, the first new specimen reported since its description more than 100 years ago. Several specimens were recently collected in the Andaman Sea. Based on these new specimens and a re-examination of the original three type specimens, we provide a full redescription of the species below.

Counts and measurements are as in Smith & Kanazawa (1977). Proportions are given as percentage of, times, or times in total length (TL), preanal length (PAL), and head length (HL). Specimens are deposited in the Centre for Marine Living Resources and Ecology (CMLRE), Kochi, India; the National Museum of Marine Biology and Aquarium, Pingtung, Taiwan (NMMB-P); and the National Museum of Natural History, Smithsonian Institution (USNM), Washington, DC, USA. All but NMMB-P specimen with regenerated tail and the proportions of total length are provided for four specimens (marked by \*) with complete tail or nearly so.

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### Family Congridae

#### *Congrhynchus* Fowler, 1934

*Congrhynchus* Fowler, 1934:272 (type species: *Congrhynchus talabonoides* Fowler, 1934, type by original designation and monotypy).

#### *Congrhynchus talabonoides* Fowler, 1934

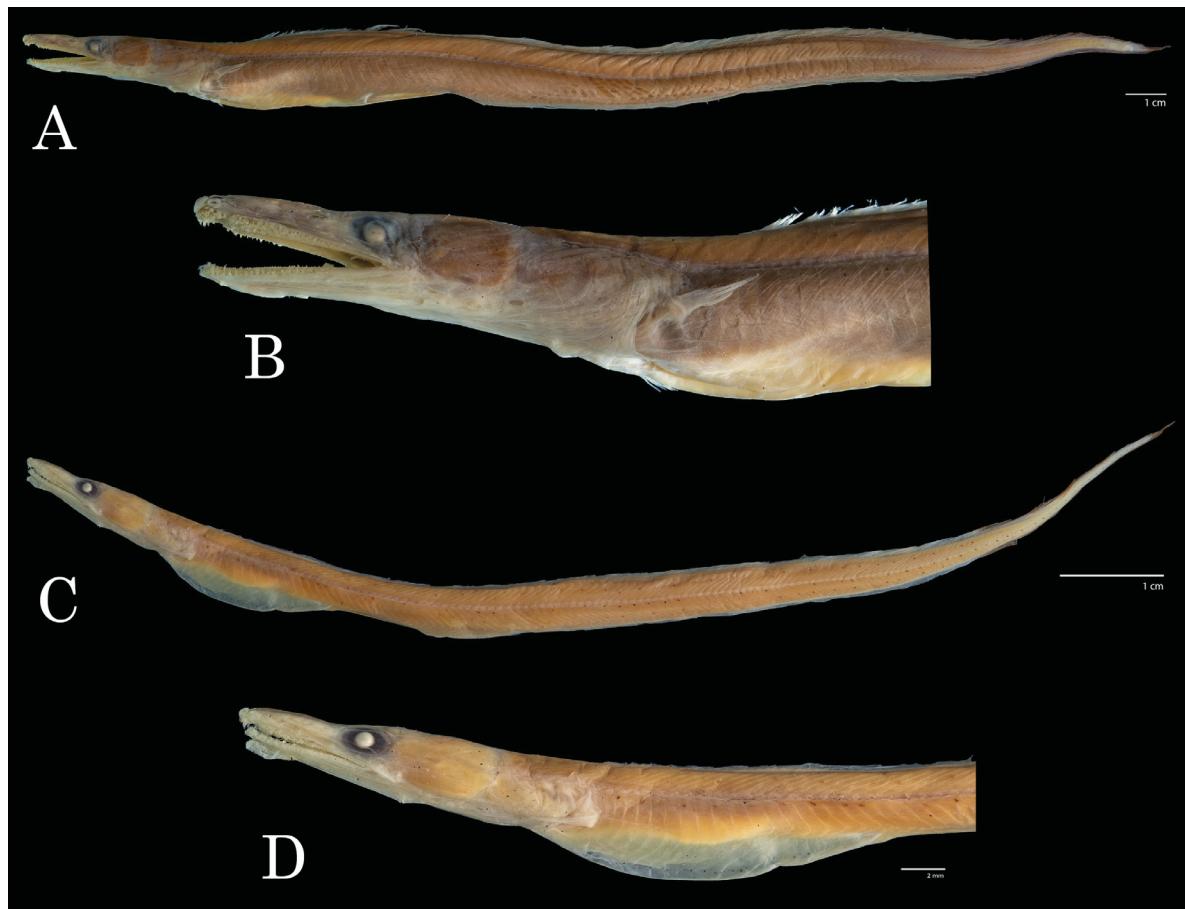
New English name: False Pike Conger

Figs. 1–2

*Congrhynchus talabonoides* Fowler, 1934:273, fig. 33 (type locality: Macabalan Pt., northern Mindanao Island, Philippines, 8°37'37"N, 124°35'E, Albatross station 5502, depth about 214 fathoms [391 m] Smith, 1994:7. Smith, 1999:1686. Ho *et al.*, 2015:150).

**Specimens examined. Holotype:** USNM 92350 (288+ mm), Philippines, Macabalan Pt., northern Mindanao

Island,  $8^{\circ}37'37''\text{N}$ ,  $124^{\circ}35'\text{E}$ , 391 m, 4 Aug. 1909, Albatross station 5502. **Paratypes:** \*USNM 93347 (1, 300+, immature female), Philippines, between Burias and Luzon, Anima Sola Island,  $12^{\circ}52'\text{N}$ ,  $123^{\circ}23'30''\text{E}$ , 393 m, 22 Apr. 1908, Albatross station 5216. USNM 93348 (1, 116+), Philippines, Gulf of Davao, Dumalag Island (S.),  $7^{\circ}02'\text{N}$ ,  $125^{\circ}38'45''\text{E}$ , 247 m, 18 May 1908, Albatross station 5247. **Non-types:** \*NMMB-P1641, (1, 417), Dong-gang, Pingtung, southern Taiwan, 4 Jan. 1965, coll. T.-C. Weng. CMLRE 2801620 (1, 356+), Andaman Sea,  $12^{\circ}49'36''\text{N}$ ,  $93^{\circ}12'46.8''\text{E}$ , 441 m, 17 Sep. 2010, R/V *Sagar Sampada*. \*CMLRE 3490602, (1, 315+), Andaman Sea,  $12^{\circ}44'34.8''\text{N}$ ,  $93^{\circ}06'18''\text{E}$ , 332 m, Apr. 2016. CMLRE 3490806, (1, 363+), Andaman Sea,  $13^{\circ}6'46.8''\text{N}$ ,  $93^{\circ}1'8.4''\text{E}$ , 411 m, Apr. 2016. \*CMLRE 3670535, (1, 345+), Andaman Sea,  $12^{\circ}29'43.1''\text{N}$ ,  $93^{\circ}10'43.9''\text{E}$ , 314 m, Nov. 2017.

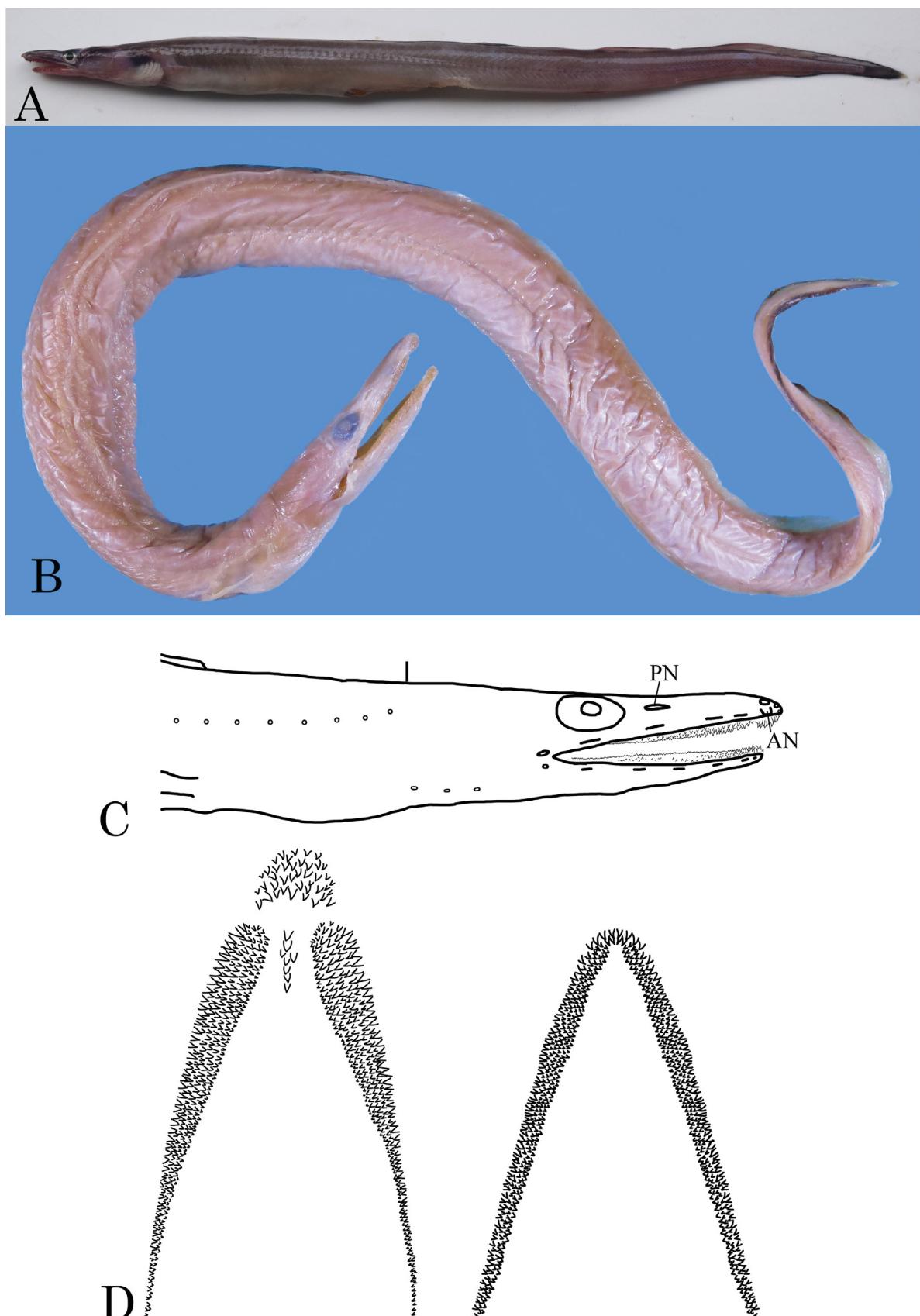


**FIGURE 1.** *Congrhyynchus talabonoides* Fowler, 1934. A–B. Holotype, USNM 92350, 288 mm TL. C–D, Paratype, USNM 93348, 116 mm TL.

**Diagnosis.** Body moderately elongate, tip of tail slender and filiform; dorsal fin begins over base of pectoral fin; pectoral fin small. Snout slender and elongate, extending beyond tip of lower jaw; upper labial flange absent; posterior nostril at mid-eye level. Teeth sharp, in multiserial bands on jaws, exposed when mouth closed; vomerine teeth in a short, narrow patch, some enlarged. Predorsal vertebrae 7–10, preanal 37–40, precaudal 50–57, total 160. No pores between or behind eyes; one supratemporal pore.

**Description.** In %TL (n = 4): preanal 37.9–39.7, predorsal 15.7–18.1, head 15.7–18.7, trunk 19.4–23.4, depth at gill opening 4.9–5.3, width at gill opening 3.3–4.3, depth at anus 4.0–5.1, width at anus 4.0–5.0. In % preanal (n = 8): predorsal 40.4–47.5, head 41.1–49.2, trunk 50.8–58.9, depth at gill opening 11.3–13.8, width at gill opening 8.6–11.1, depth at anus 10.3–14.8, width at anus 10.4–13.0. In % head length (n = 8): snout 28.5–32.3, eye 11.0–14.0, upper jaw 39.9–44.2, gill opening 5.9–15.5, interbranchial 7.2–12.4, pectoral fin 14.9–22.4.

Lateral line pores: predorsal 7, prepectoral 7–8, preanal 34–38. Head pores: POM 10 (7 + 3), IO 5 (4+1), SO 3, ST 1. Vertebrae: predorsal 7–10, preanal 37–40, precaudal 50–ca. 57, total 160 in NMMB-P specimen (134+ in holotype, 131+ to 160+ in the other specimens).



**FIGURE 2.** *Congryynchus talabonoides* Fowler, 1934. A. CMLRE 3670535, 345+ mm TL, fresh. B–D. NMMB-P1641, 417 mm TL. C. Head pores. D. Jaw teeth, upper jaw (left) and lower jaw (right).

Body elongate, deepest around anus, rounded in cross section before anus, becoming compressed posteriorly; trunk relatively stout, 1.1–1.4 times head length; tip of tail tapering, filiform; anus near anterior third of total length.

Dorsal-fin origin above pectoral-fin base, continuous around tip of tail with caudal and anal fins. Anal-fin origin immediately behind anus. Pectoral fin small, pointed with narrow base, its length less than that of snout. Gill opening large, its height about same as eye diameter; interbranchial as broad as gill opening and eye.

Head moderately large, 5.8–6.5 times in TL, deepest about occiput, greatly tapering anteriorly from this point; dorsal profile nearly straight from occiput to internasal space; snout pointed, narrowly triangular in dorsal view, its length 3.2–3.5 times in head length, projecting beyond lower jaw; lower jaw longer than snout; fleshy part of snout narrow, with shallow folds, projecting anteriorly beyond anterior end of intermaxillary tooth patch; rictus slightly behind posterior margin of eye.

Anterior nostril small, tubular, near tip of snout, directed ventrolaterally. Posterior nostril oval, with a slightly raised rim, in front of eye at about mid-eye level, about one nostril diameter from anterior margin of eye. Lips simple without flange. Tongue long and pointed, mostly connected to the mouth floor.

Lateral line complete, the canal extends to a short distance before caudal-fin base; 7 pores before dorsal-fin, 7–8 before pectoral-fin bases, ca. 34–38 before origin of anal fin and about 130 in total, those on posterior portion not clear.

Head pores (Fig. 2C) large and slit-shaped. Supraorbital canal with 3 pores; the first (ethmoidal pore) small, on ventral surface of snout tip, embedded inside the folds; the second enlarged, about twice the size of first, and immediately in front of anterior nostril; the third greatly enlarged and immediately above anterior nostril. Infraorbital canal with 5 pores, 4 along upper lip and 1 behind rictus; the first two pores between anterior and posterior nostril; the third directly below posterior nostril; the fourth below middle of eye; the fifth large and round, immediately behind posterior end of maxilla; no pores behind eye. Preoperculomandibular canal with 10 pores, 7 in mandibular section and 3 in preopercular; first 6 mandibular pores along lower jaw, the seventh behind rictus and below the fifth infraorbital pore; the 3 preopercular pores larger and forming a slightly curved row. Supratemporal canal with single median pore.

Teeth on jaws moderately small and multiserial, mostly exposed when mouth closed, outermost jaw teeth directed laterally. Intermaxillary region with cluster of small teeth forming about 4–6 curved rows, fully exposed when mouth closed, separated from maxillary and vomerine teeth. Vomerine teeth in a short, narrow patch, about 3 rows medially, 1 row posteriorly, some middle teeth enlarged. Maxillary teeth in about 5–6 rows anteriorly, gradually narrowing to about 2 rows posteriorly, the outer teeth larger. Mandibular teeth in about 5 or 6 rows anteriorly, narrowing posteriorly to about 2 rows, those on anterior portion and outer row curved and sharp, whereas those on inner portion smaller and blunter; the anterior end of mandibular tooth patch fits into the gap between intermaxillary and vomerine teeth when mouth closed.

**Coloration.** When fresh, body mostly dark grayish with ventral surface of gill chamber and abdomen paler. When preserved, uniformly light brown with posterior portion of margins of vertical fins black. The smallest specimen has prominent small melanophores scattered on the side of the body and tail, arranged in three irregular series. Another row of melanophores lies on the midventral line and continues under the anal fin. These small melanophores appear to be remnants of larval pigmentation.

**Etymology.** From the Greek *rhynchos*, snout, appended to *Conger*, the type genus of the Congridae, in reference to the relatively long and slender snout. The specific name *talabonoides* refers to the superficial resemblance to the muraenesocid eel *Congresox talabonoides*.

**Distribution.** Known from Taiwan, the Philippines, and the Andaman Sea; depth 247–441 m.

**Remarks.** The affinity of this eel lies with those members of the Congridae, subfamily Congrinae, that have a slender, filiform tail; the flange on the upper lip reduced or absent; and at least some of the teeth enlarged and sharp. This group includes *Bathycongrus*, *Bathyuroconger*, *Uroconger*, and *Xenomystax*. *Congrynchus* resembles *Xenomystax* more than the others in the elongated snout and the bristle-like and outwardly directed maxillary and mandibular teeth that are largely exposed when the mouth is closed. It differs from *Xenomystax* in the shorter vomerine tooth patch and the lack of a separate inner row of maxillary teeth. At least superficially, it also resembles certain nettastomatid eels, especially in the elongate snout and the exposed maxillary and mandibular teeth. It differs from these in the shorter vomerine tooth patch and the presence of pectoral fins. The remnant larval pigmentation, in three irregular series on the side of the body, is similar to the pattern found in *Bathycongrus* and

*Bathyuroconger*. This suggests a relationship to those genera, perhaps on a line leading to *Xenomystax* and possibly the Nettastomatidae. Further morphological and genetic studies are needed to explore this possibility.

The species was described from the Philippines. The present material extends the known range north to Taiwan and west to the Indian Ocean. We can find no obvious differences between specimens from the various locations.

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